LineUp With Math™ Alignment
Mathematics Content Standards, Benchmarks and Performance Standards
June 2002

Strand: NUMBER AND OPERATIONS
Standard: Students will understand numerical concepts and mathematical operations.

5-8 Benchmark: Compute fluently and make reasonable estimates.

Performance Standards: Grade 8	***LineUp With Math™* Activities**
6. Select and use appropriate forms of rational numbers to solve real-world problems including those involving proportional relationships.	--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios. --Use an interactive simulator plus calculation worksheets to apply proportional reasoning to identify and resolve distance, rate, time conflicts in air traffic control.

Strand: ALGEBRA
Standard: Students will understand algebraic concepts and applications**.**

5-8 Benchmark: Represent and analyze mathematical situations and structures using algebraic symbols.

Performance Standards: Grade 8	***LineUp With Math™* Activities**
6. Formulate and solve problems involving simple linear relationships, find percents of a given number, variable situations, and unknown quantities.	--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios. --Use percent relationships to resolve distance, rate, time conflicts in air traffic control.

5-8 Benchmark: Analyze changes in various contexts.

Performance Standards: Grade 8	***LineUp With Math™* Activities**
3. Use appropriate problem-solving strategies (e.g., drawing a picture, looking for a pattern, systematic guessing and checking, acting it out, making a table or graph, working a simpler problem, writing an algebraic expression or working backward) to solve problems that involve change.	--Use an interactive simulator plus calculation worksheets to model and resolve air traffic control conflicts. --Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios.
4. Solve multi-step problems that involve changes in rate, average speed, distance, and time.	--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios. --Identify and resolve distance, rate, time conflicts in air traffic control problems by varying plane speeds or changing plane routes.

5. Analyze problems that involve change by identifying relationships, distinguishing relevant from irrelevant information, identifying missing information, sequencing, and observing patterns.	--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios.

Strand: MEASUREMENT **Standard:** Students will understand measurement systems and applications.	
5-8 Benchmark: Apply appropriate techniques, tools, and formulas to determine measurements.	
Performance Standards: Grade 8	***LineUp With Math™* Activities**
7. Solve simple problems involving rates and derived measurements for such properties as velocity and density.	--Identify and resolve distance, rate, time conflicts in air traffic control problems by varying plane speeds or changing plane routes.

Strand: DATA ANALYSIS AND PROBABILITY **Standard:** Students will understand how to formulate questions, analyze data, and determine probabilities.	
5-8 Benchmark: Develop and evaluate inferences and predictions that are based on data.	
Performance Standards: Grade 8	***LineUp With Math™* Activities**
3. Conduct simple experiments and/or simulations, record results in charts, tables, or graphs, and use the results to draw conclusions and make predictions.	--Use an interactive simulator plus calculation worksheets to model and resolve air traffic control conflicts.
4. Compare expected results with experimental results and information used in predictions and inferences.	--Predict and resolve aircraft conflicts and explain results of mathematical calculations and simulations.